# MICHIGAN ORTHODONTICS EXAMINATION BROCHURE

Be sure that you have submitted your examination application and appropriate fee to the Bureau of Health Professions, Department of Community Health, prior to the deadline date of May 1, 2006 in order to be scheduled for the examination. If you have not received an examination application, call the Bureau at (517) 335-0918 or go to the following website: <a href="https://www.michigan.gov/healthlicense">www.michigan.gov/healthlicense</a>.

### 2006 ORTHODONTICS EXAMINATION BROCHURE

### **INTRODUCTION:**

The licensing examination for Orthodontists is designed to measure the knowledge, skills and abilities deemed essential to protect the public's health, safety and welfare.

### **EXAMINATION SCHEDULE:**

The examination will be given on **June 5 – 6. 2006.** After the Bureau has approved you to take the examination, you will be sent an Admission Letter. This document will specify the room to which you must report for the examination. Even if you are taking only one part of the examination, you must report to the examination room by no later than **8:15 A.M.** on the first day. A general schedule of the examination is shown below.

The test center is located at the University of Michigan, School of Dentistry, Ann Arbor, MI. Information regarding the location of the site can be found near the end of the brochure. Parking may be a problem and should be factored into your schedule for arriving at the site. You should be prepared to pay a parking fee.

<b>DATE</b> Day 1	<b>TIME</b> 8:15 A.M.	PROCEDURE Submission of Case Histories
	9:00 A.M.	Diagnosis & Treatment Planning (1 hour)
	10:30 A.M.	Wirebend Exercise (1 hour)
	1:00 P.M.	Essay exam (3 hours)
	5:00 P.M.	Pick up cases from the room in which they were displayed originally. (The time shown is approximate.)
Day 2	8:30 A.M.	Multiple Choice Examination (2 hours)
	8:30 A.M. to completion	Oral Examinations (1 hour) - bring your cases to the oral exams. You should be at the site ½ hour prior to your scheduled oral exam time. Candidates taking the written exam will be scheduled for their oral exams later in the day.

The above time frame may be modified depending upon the number of candidates.

### SPECIAL ACCOMMODATIONS:

If you require special accommodations because of a disability, a letter that specifies the disability and requested accommodation(s) must be submitted to the Bureau of Health Professions. A physician or other licensed professional qualified to diagnose and treat the disability must provide detailed documentation of the disability. Requests for accommodations must be received no later than May 1, 2006. However, because of the time required to review documentation and the possible need for additional information, your request should be mailed as early as possible. A letter approving or denying your request will be sent following the review of the information submitted.

Submit your request and relevant documentation to:

Lucinda Clark
Bureau of Health Professions
MI Department of Community Health
PO Box 30670
Lansing, MI 48909

### **ADMISSION REQUIREMENTS:**

In order to be admitted to **EACH** part of the examination, you MUST:

- 1. **BE ON TIME**. You will **NOT** be admitted to the examination after it has begun.
- 2. **PRESENT THE ADMISSION LETTER** that will be sent to you approximately two weeks prior to the examination. If you have not received an Admission Letter one week prior to the exam, call the Bureau of Health Professions, Department of Community Health, at (517) 335-0918. If you do not have your Admission Letter, you may still be admitted to the examination provided that your name is included on the site roster. A substitute Admission Letter will be prepared for you at the time of check-in. At the conclusion of the examination, your Admission Letter will be collected and retained. It is your responsibility to turn in the Admission Letter to the testing staff at the conclusion of the examination.
- 3. **PRESENT OFFICIAL SIGNED PHOTOGRAPHIC IDENTIFICATION.** Acceptable identification includes a <u>valid</u> Michigan driver license or another state issued driver license, Secretary of State Identification, passport, government-issued identification, school identification, or employment identification. The identification presented MUST include BOTH a photograph and signature. <u>Without the required identification</u>, you will not be permitted to take the examination.

If you do not present the required signed photographic identification or you are late to the scheduled examination section, you will NOT be allowed to take the examination/section and you will forfeit your examination fee. You will be required to submit a new examination application and fee for the next regularly scheduled administration.

### **CANDIDATE ANONYMITY**

You will be assigned a unique candidate identification number that will be included in your Admission Letter. With the exception of the written examination, you should record **ONLY** your number on all examination materials to be scored. To maintain confidentiality, you should NOT introduce yourself by name to the examiners.

### **EXAMINATION CONDUCT**

No reference materials may be utilized during any part of this examination. Textbooks, notebooks, briefcases, large purses, pagers, cell phones, and beepers should NOT be brought to your seat. Neither the State nor the University will be responsible for any loss of items brought to the examination site.

Cheating is defined as any activity, behavior or procedure that a candidate employs that would enable him/her to pass an examination by dishonest, fraudulent, or deceitful means. Examples of cheating would include, but are not limited to, obtaining answers from other candidates, copying from another's answer sheet, copying the examination, removing or attempting to remove test materials or notes from the examination room, using prepared notes during the examination, discussing the examination with others during the examination, referring to textbooks, informing other candidates of the oral questions prior to their taking that section, or having someone else take the examination for the candidate.

Anyone found involved with any of the above activities or behaviors may be denied licensure.

You will be required to sign a statement, at the time of the examination, agreeing to not divulge the contents of the examination.

### MATERIALS TO BE BROUGHT TO THE EXAMINATION:

You will need to supply the following items at the time of the examination.

- 1. Two **#2** lead pencils for the written examination
- 2. A tape recorder and tape(s). The tape(s) will be retained at the conclusion of the oral examination. **Make certain that the tape recorder works**. You will need to have sufficient tapes for at least 90 minutes. The quality of the recording is your responsibility.

If you fail to bring a recorder or it does not operate properly, you will not be permitted to review and/or appeal your results should you fail the oral examination. You must turn in your tape(s) to the testing staff at the conclusion of this section.

- 3. Ruler, compass, dividers, tracing paper, gauges and protractors for use during the Diagnosis and Treatment Planning section.
- 4. Instruments needed for the Wire Bending section.
- 5. Case Histories as described later in this brochure.

### **EXAMINATION FORMAT**

The Orthodontic Examination shall include both Written and Clinical sections and shall include, but not be limited to, the following topics:

- 1. Facial Growth
- 2. Human Genetics
- 3. Occlusal Development
- 4. Histology and Physiology
- 5. Radiographic Cephalometry
- 6. Dental Materials in Orthodontics
- 7. Diagnosis and Treatment Planning
- I. <u>Written examination</u>: (Essay 3 hours; Multiple Choice 2 hours)
  The written examination will consist of approximately 100 multiple-choice items and 10 essay questions. Answer sheets and response sheets will be provided.

Your answers to the multiple-choice items **MUST** be given on the machine scorable answer sheet that will be provided. All marks must be entered with a #2 lead pencil and must be **DARK.** Be sure that no stray marks appear on the answer sheet as they may be misread as answers. If you change your mind on an item, make sure to erase the incorrect answer completely.

It is best to answer all items, even if you are not sure of the answer. There is **NO PENALTY** for guessing. There is **ONE BEST** answer for each item.

You may use either a pen or pencil to write your responses to the essay questions. Your responses **MUST BE LEGIBLE** so that the individuals evaluating your responses can read what you have written. You may lose points if the examiners cannot read your writing. Your responses to the essay questions will be photocopied so be sure your writing is clear and dark.

**NOTE**: If you have passed the American Board of Orthodontics written examination, you can waive the written portion of the Michigan examination. The American Board must submit a letter verifying passage of the American Board written examination to:

Bureau of Health Professions, Application Unit MI Department of Community Health PO Box 30670 Lansing, MI 48909

### II. Diagnosis and Treatment Planning: (1 hour)

The examiners will provide records of one patient, including relevant dental and medical history, for Diagnosis and Treatment Planning. A form will be provided on which your responses must be written. The final tracing must be submitted when you turn in your write-up of the case.

You must bring the following materials in order to evaluate and write up the case provided by the examiners:

- 1. Ruler
- 2. Compass
- 3. Dividers
- Tracing Paper
- 5. Gauges & Protractors (to analyze cephalometric films and study models)

You will be evaluated using the following criteria:

- 1. Diagnosis of the case
- 2. Treatment objectives
- 3. Treatment plan and mechanics

### **III.** Wire Bending: (1 hour)

You must provide adequate instruments, (e.g., pliers, marking pencil, wire cutters, etc.) to construct a set of coordinated maxillary and mandibular arch wires. Standard pre-formed rectangular arch wire blanks will be provided at the time of the examination.

You will be given a photocopy of an upper and lower study model on which to form your wires. You will be asked to place first, second, and third order bends, and omega tieback loops in the arch wires. Specific instructions and parameters for the arch wires will be given at the time of the examination.

You should refer to <u>Clinical Orthodontics</u> by Charles Tweed, published by C. V. Mosby in 1966, for information regarding construction of these arch wires.

Your final product will be scored on the following factors:

- 1. Arch form, coordination, symmetry and flatness
- 2. Accuracy and evidence of clear first, second and third order bends and tieback loops

### IV. Oral Examination: (1 hour)

An oral interview will be conducted for each candidate. You will be examined orally for approximately one hour; therefore, you are to bring a 90-minute cassette tape to the oral examination as well as your cases. You must tape the interview. The tapes of the oral examination will be retained by the testing staff at the conclusion of this section.

You must be prepared to defend the diagnosis and treatment of your clinical cases and the diagnosis and treatment plan on the case provided by the examiners. You must also be prepared to exhibit a basic knowledge of cranio-facial growth, tooth movement and oral physiology.

### V. Case Histories:

You MUST present <u>five (5) completed comprehensive case histories</u> in the format outlined below. Of the cases presented, at least one must be a **non-extraction case** and one must be a **permanent tooth extraction**. These cases must be diagnosed, treated and retained solely by you. In cases that require multiple phase treatment, the final phase of full fixed appliance therapy must be initiated and completed by you.

# If you are a re-examination candidate, you must bring new or updated cases from those presented previously.

If you completed your graduate training within the last two years, a **MINIMUM** of three (3) completed cases must be presented. For each of the remaining cases, two (2) incomplete cases must be submitted for each of the cases that is not complete. That is, you may present five completed cases OR four completed cases and two incomplete cases OR three completed cases and four incomplete cases. No other combination of cases will be accepted.

Current progress reports including cephalometrics, tracings, panoramic radiographs, photos and casts MUST be included in the incomplete cases. Incomplete cases must demonstrate a minimum of one year of treatment. If you are submitting incomplete cases, you must submit study models of the work in progress. Write-ups for incomplete cases need to focus on an evaluation of the proposed treatment and the treatment required.

All pages of each case history are to be typed on 8.5" x 11" paper and placed in a separate loose-leaf binder. Each page should be placed in a transparent protective cover. Separate acetate tracings must be included for each case.

# NEITHER YOUR NAME NOR YOUR INSTITUTION SHOULD APPEAR ON ANY OF THE PAGES IN THE CASE HISTORY REPORTS. The only identifying information should be your assigned identification number.

Each case history must include the following information:

- 1. Title Page
- 2. Resume
- 3. Cephalometric summary
- 4. History and etiology
- 5. Diagnosis include a brief description of the nature and extent of the anomalies using a specific problem list.
- 6. Specific objectives of treatment for the maxilla, mandible, maxillary dentition and mandibular dentition.
- 7. Treatment Plan include your reason for choosing your treatment plan, extraction or non-extraction, appliances used, anchorage considerations, type of retention, supplemental therapy and prognosis.
- 8. Treatment Progress include a description of the actual treatment, frequency of the appointments, response to treatment and complications, if any. Do not record what was done at each appointment from your treatment chart.
- 9. Results Achieved include skeletal, facial, oral, dental and functional changes and conditions revealed by the radiographic examinations.
- 10. Retention include appliances, rationale, appointments and supplementary procedures.
- 11. Final evaluation include **ALL** pertinent findings, observations and prognosis for stability, such as tooth relationships, overjet, overbite and profile at the conclusion of active treatment. Describe any post-treatment changes or relapses observed. Minor relapses do not disqualify cases for presentation. Mention how you would handle the case differently if you had the opportunity to treat it again. State what you learned about your specific diagnosis and treatment. This component of the case report is critical.

Case histories should be informative. They should tell what you did for each patient and explain why you did it. Avoid undue brevity or excessive length. Case history reports are about three to six pages. A sample case history, written section, is included at the end of the brochure for your assistance.

Scanned or digital photographs and scanned radiographs will be permitted provided that they are of high quality.

Models should have the last name of the patient on them in case a set of models and the write-up get separated.

### Pre-Treatment Records (Designated by **BLACK**)

- 1. Study models (mandatory)
- 2. Periapical or panoramic radiographs (if panoramic radiographs are submitted, maxillary and mandibular incisor periapical radiographs are recommended also)
- 3. Cephalometric radiographs
- 4. Cephalometric tracings Acetate
- 5. Facial photographs
- 6. Intraoral color photographs

### Post-Treatment Records (Designated by **RED**)

- 1. Study models (mandatory)
- 2. Periapical or panoramic radiographs (same recommendations as above)
- 3. Cephalometric radiographs
- 4. Cephalometric tracings (acetate) and serial composite tracings
- 5. Facial photographs
- 6. Intraoral color photographs
- 7. Summary of cephalometric measurements

Supplemental records made at other stages of treatment may be included, but should be clearly labeled and designated by **BLUE** so that they are not confused with the above records.

You must follow the guidelines included in the American Board of Orthodontics' <u>Examination Information</u>. The booklet can be obtained by writing the American Board of Orthodontics, 401 North Lindbergh, St. Louis, MO 63141 or call (314) 432-6130.

### A THESIS WILL NOT BE ACCEPTED IN LIEU OF THE REQUIRED CASES.

A list of names and addresses of the patients treated and submitted for case presentation scoring <u>must</u> be sent prior to the examination. You will also need to include the date of your graduation from the specialty program. **All lists must be received by May 1, 2006.** 

Examiners will **NOT** have access to these listings prior to or during the examination process. Failure to submit this list may result in disqualification from the examination.

The list of patient names, including whether or not the case is complete or incomplete, your educational program and graduation date should be sent to:

KNK Consulting 2956 Dobie Road Mason, MI 48854

They can also be emailed to karaschmitt@hotmail.com or faxed to (517) 347-9695

### **SCORING THE EXAMINATION**

You must achieve a score of 75% or above in **EACH** of the following three major categories:

- 1. Case Histories
- 2. Written
  - a. Essay
  - b. Multiple-choice
- 3. Oral Examination/Wire Bend/Case Diagnosis
  - a. Oral Examination
  - b. Wire Bending
  - c. Case Diagnosis

## ALL EXAMINER SCORES WILL BE USED IN THE FINAL TABULATION OF THE HAND-SCORED SECTIONS.

The written examination will be machine scored. Two or more examiners will evaluate the other sections of the examination. Each examiner will evaluate the sections independently and the final score for each section will be the average of the examiners= scores.

During the course of the examination, the examiners may use expression such as "That's okay" or "Fine". These comments should NOT be construed as anything other than a polite way of completing a checkpoint or the end to your response.

In order to pass the examination, you must receive a score of 75% on **EACH** section of the examination. Those sections in which you receive a score of **LESS** than 75% may be repeated once within an 18-month period. Should you not receive a 75% in each section during the second attempt, you will need to retake the entire examination.

Your score(s) will be released in approximately six weeks following the last day of your examination. Results will NOT be provided over the phone nor will they be released to a third party unless you provide a written request to the Bureau to have the results submitted to a specific third party.

If you receive a score of **PASS**, that will be the only information available as to your success on the examination. Actual numeric scores are NOT available.

If you **FAIL** the examination, your numeric score along with a breakdown of your performance on each section failed will be provided. This information is intended to assist you in preparing for the re-examination.

### **REVIEW OF FAILED EXAMINATION**

Should you fail an examination section, you may request a personal review of the examination documents.

1. Complete the Request for Review form that will be included with your Notice of Failure, along with a cashiers check or money order in the amount of \$50.00 made payable to "State of Michigan". Send the form and payment within thirty (30) calendar days of the Notice of Failure date to:

Dr. Kara Schmitt KNK Consulting 2956 Dobie Road Mason, MI 48854

- 2. The review will be conducted in the Lansing area. A specific time and location will be included with your Notice of Failure.
- 3. The review shall be limited to a sight review ONLY. You will be given one-half of the amount of time allocated for the administration of the failed section (*i.e.*, if two hours were allocated for the administration of a section, you would have one hour for the review of that section). Notes made by you during the review may not be removed from the room nor copied. Reference material may be brought to the review.
- 4. The review shall be limited to the area(s) of failure ONLY.
- 5. At the conclusion of the review, you must decide whether or not you wish to appeal your results. If you decide to appeal, you may submit for consideration any information or documentation that pertains to the failed section(s) of the examination.
- 6. All questions, comments, and documentation made by you will be submitted to the Orthodontics Examination Committee for review. The committee's decision will be forwarded to the Michigan Board of Dentistry.
- 7. The Michigan Board of Dentistry shall take action on the recommendation(s) presented.
- 8. Following the Board's decision, the Bureau of Health Professions will notify you of the results of your appeal.

# UNIVERSITY OF MICHIGAN SCHOOL OF DENTISTRY

1011 North University Avenue Ann Arbor, MI

Located at the corner of North University and Fletcher Streets
Across from the Michigan League

For easier and more efficient address and parking information, you can access the schools website at: <a href="https://www.dent.umich.edu">www.dent.umich.edu</a> then click on directions and parking.

For local accommodations, click on the Ann Arbor Convention Bureau website at: <a href="https://www.annarbor.org">www.annarbor.org</a>

# SAMPLE WRITE-UP FOR CASES

### **CASE REPORT**

Patient Jeff J

Gender Male

Age: Start 14-1

**End** 16-6

Angle Classification Class II, Division 1

Length of Treatment 27 months

Date of Birth: 9/22/86 Age: 14 years 1 month

### Resume

Pretreatment Records 5/31/00

Classification: Class II, Division 1

**Treatment:** 

Band and bond maxilla and mandible 11/14/00
Deliver combi-pull headgear 11/28/00
Band 7's 05/27/01
Deliver TPA and intrusion arch 09/27/01
Place maxillary closing loops, start Class II elastics 05/17/02
Appliances removed 03/04/03
Deliver retainers 03/05/03

Active Treatment Time: 27 months

Post-treatment Records: 03/04/03

Retention:

-Maxillary and Mandibular Hawley Retainers

**Assessment:** 

Tooth Relationship Good
Overjet Good
Overbite Excellent
Function Excellent
Facial Profile Excellent

Date of Birth: 9/22/86 Age: 14 years 1 month

### I. GENERAL HISTORY

Jeff J, accompanied by his mother, presented for treatment to the graduate orthodontic clinic on May 31, 2000 following a referral by her general dentist. Jeff was 14 years and 1 month old at the time of the initial exam. Mrs. J was concerned with the appearance of Jeff's teeth and his "overbite". Jeff was taking medication for asthma and Tourette's Syndrome, both of which were under control.

### II. ANALYSIS

### A. Facial Assessment

Clinical examination revealed a symmetric face in the frontal view. Lips slightly apart at rest. Jeff showed 3 mm of incisor at repose and 9 mm of incisor and no gingival display when smiling. He had a convex facial profile with a retrognathic chin, a slightly everted lower lip, and an acute mentolabial angle. He had a normal nasolabial angle.

### **B.** Intraoral Assessment

The patient presented in the late mixed dentition with all permanent teeth present except maxillary left first and second premolars, and the third molars. The deciduous maxillary left first and second molars were present and loose. The molar relationship was Class II on both the right and left sides. Maxillary dental midline was coincident with the face and the mandibular midline was 2 mm to the right. Overjet was 9 mm and the overbite was 6 mm. There was 2 mm of crowding in the mandibular arch, while the maxillary arch contained adequate space. The curve of spee was approximately 2 mm. Oral hygiene was fair to poor and periodontal tissues had a mild gingivitis. No caries were present.

### C. Functional Assessment

During the initial temporomandibular exam, no signs or symptoms were present. The maximum opening, left and right lateral movements and protrusive movements were within normal limits. There was no discrepancy between centric relation and centric occlusion. The mandibular path of opening and closure were straight with respect to the frontal and sagittal planes.

Date of Birth: 9/22/86 Age: 14 years 1 month

### D. Model Analysis

Analysis of the dental models revealed a Class II molar and canine relationship on the right and left sides. Overbite was 9 mm and overjet was 6 mm. The maxillary arch has adequate space and mandibular arch had 2 mm of crowding. The maxillary intermolar width was 31.0 mm. Maxillary permanent right and left first molars were rotated mesially.

### E. Radiographic Analysis

The panoramic radiograph showed third molars developing normally. All other maxillary and mandibular permanent teeth were present and normal. No pathology was evident and alveolar bone height appeared to be normal.

### F. Cephalometric Analysis

The cephalometric analysis indicated a relatively orthognathic maxilla and mandible, SNA 80° and SNB 72°. The mandibular plane angle was normal, measuring 22° to Frankfort horizontal. The mandibular central incisors were retroclined and retruded (IMPA 84°; LI-NB 2 mm). The maxillary incisors were proclined to 113° to the anterior cranial base (Sella-Nasion). The nasolabial angle was average. The lips on the cephalogram were not closed and therefore some of the cephalometric soft tissue measurements such as upper and lower lips to E plane are inaccurate.

### III. PROBLEM LIST

- 1. Class II, Division 1 malocclusion
- 2. Mandibular midline 2 mm right of facial
- 3. Bolton excess of 2 mm in maxillary 3-3
- 4. Excess overjet and overbite
- Moderate curve of spee
- 6. Mild crowding in mandible
- 7. Poor oral hygiene

### IV. TREATMENT OBJECTIVES

After the initial examination and analysis of the records, the following treatment objectives were established:

Date of Birth: 9/22/86 Age: 14 years 1 month

- 1. Attain Class I molar and cuspid relationship
- 2. Level and align arches
- 3. Eliminate crowding and spacing
- 4. Reduce overjet and overbite
- 5. Coordinate and finish arches
- 6. Obtain a balanced, harmonious, and functional occlusion

### V. TREATMENT PLAN

- 1. Maintain adequate oral hygiene
- 2. Non-extraction treatment
- 3. Full banding and bonding of both arches with preadjusted fixed edgewise appliances
- 4. Bond maxillary and mandibular teeth
- 5. Combi-pull headgear for Class II correction
- 6. TPA to derotate 6's and anchorage
- 7. Coordinate and detail arches
- 8. Retain teeth with removable Hawley retainers

### VI. PROGRESS OF TREATMENT

### A. Treatment Sequence

Jeff was seen on a monthly basis during active treatment. Jeff was initially fit with full bands and bonding of maxilla and mandible and a combi-pull headgear. Due to compliance issues, Jeff was fit with a TPA to de-rotate the maxillary <u>6's</u> and an intrusion arch tied distal to the maxillary <u>2's</u> to intrude the maxillary incisors and aid in Class II correction. Space was opened distal to the <u>2's</u> and a maxillary 2 loop closing loop archwire was placed to close. Class II elastics were started at this time. Seven months into treatment the 7's were bonded. Headgear was continued throughout treatment

### **B.** Complications

Compliance and hygiene were a constant struggle for Jeff throughout most of the treatment period. Jeff had several emergencies due to bracket failure, his headgear compliance and oral hygiene were poor. Jeff had vast improvement in his compliance in the last eight months of treatment.

Date of Birth: 9/22/86 Age: 14 years 1 month

### VII. RESULTS ACHIEVED

The change in Jeff's occlusion from the initial consultation to the finish of treatment was positive. Jeff's Class II malocclusion was converted into a class I. His soft tissue profile was maintained and slightly improved, and he had a mutually protected occlusion.

### **VIII. FINAL EVALUATION**

The patient and his mom were extremely pleased with the results of orthodontic treatment. In retrospect, the treatment was appropriate. It yielded a highly acceptable esthetic and functional change to Jeff's dentition. A mutually protected occlusion was established. Stripping of the maxillary 2-2 could have addressed the Bolton discrepancy and excess overjet at time of deband.

Date of Birth: 9/22/86 Age: 14 years 1 month

loff I						
Jeff J		Initial	Final	Mean		
Age		13-8	16-6			
Maxilla						
	A-N Perpendicular (mm)	0.6	0.4	0	±	2
	SNA (°)	83.4	81.7	82	±	4
Mandible						
	Pog-N Perpendicular (mm)	1.5	5.4	-5	±	3
	SNB (°)	83.1	81.1	80	±	3
	Pog - NB (mm)	0.9	5.7	1.9	±	2
Intermaxi	,	0.0	0.7	1.0	_	_
I	ANB (°)	0.3	0.6	2	±	2
	Wits Appraisal (mm)	-2.2	-2.9	-1		1
Vertical	Wits Appraisal (IIIII)	-2.2	-2.9	-1	±	'
verticai	F:-  A - (F   ND-) (0)					
	Facial Angle (FH-NPo) (°)	90.8	92.6	88	±	7
	FMA (MP-FH) (°)	21.1	21.8	22	±	5
	Y-Axis Downs (SGn-FH) (°)	57	54.3	61	±	3
Dental						
	Interincisal Angle (U1-L1) (°)	135.7	126.1	130	±	5
	IMPA (L1-MP) (°)	88.4	92.9	95	±	7
	L1 - NB (mm)	3	5.5	4	±	2
	L1 Protrusion (L1-APo) (mm)	2.5	3.1	2.7	±	2
	U1 - SN (°)	107.7	110.5	103	±	6
	U-Incisor Protrusion (U1-APo)					
	(mm)	4.7	6.9	6	±	2
	U1 Most Labial-A (perp to FH)					
	(mm)	5.7	9.6	3.5	±	1
Facial						
	Nasolabial Angle (Col-Sn-UL) (°)	113.2	106	102	±	8
	Lower Lip to E-Plane (mm)	-6.5	-6.7	-4	±	2
	Upper Lip to E-Plane (mm)	-4.6	-5	-2	±	2